CLAIMS

What is claimed is:

1. 1.   A method for designing a circuit that satisfies user-specified functional requirements,

2.   the method comprising the steps of:

3.   receiving said user-specified functional requirements over a network from a client;

4.   automatically determining, based on said user-specified requirements, components

5.   and a topology for constructing said circuit;

6.   wherein the step of determining components includes determining components that

7.   have operational values such that, when said components are arranged

8.   according to said topology to form said circuit, the circuit satisfies said user-

9.   specified functional requirements; and

10.   delivering to said client over said network component information that identifies said

11.   components.

2.   The method of Claim 1 wherein:

1.   the client is executing a browser; and

2.   the step of delivering said component information includes delivering to said browser

3.   one or more web pages that identify said components.

1. 3.   The method of Claim 2 wherein the step of delivering includes delivering one or more

2.   web pages that identify said components and that include at least one control which,

3.   when selected, initiates an operation for placing an order over said network for at

4.   least one of said components.

1. 4.   The method of Claim 3 wherein the step of automatically determining

2.   components includes the steps of:

3   automatically determining, based on said user-specified requirements, a plurality of

4   suggested components, each of which may be used to design a circuit that

5   satisfies said user-specified functional requirements;

6   delivering to said browser over said network one or more suggested component web

7   pages that identify said plurality of suggested components;

8   in response to selection of a suggested component of said plurality of suggested

9   components identified in said one or more suggested component web pages,

10   receiving from said browser over said network a message that identifies the

11   selected suggested component; and

12   automatically determining, based on said user-specified requirements and said

13   selected suggested component, components for constructing a circuit that

14   includes said selected suggested component and that satisfies said user-

15   specified functional requirements.

1   5.   The method of Claim 4 wherein the step of delivering to said browser over said

2   network one or more suggested component web pages includes delivering one or

3   more suggested component web pages that specify, for each suggested component of

4   said plurality of suggested components, a price value.

1   6.   The method of Claim 4 wherein the step of delivering to said browser over said

2   network one or more suggested component web pages includes delivering one or

3   more suggested component web pages that specify, for each suggested component of

4   said plurality of suggested components, a component identifier and one or more

5   operating values.

1   7.   The method of Claim 3 further comprising the steps of:

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2   determining a set of alternative components for a particular component of said

3   components, wherein each alternative component in said set of alternative

4   components may be used in said circuit in place of a particular component;

5   delivering to said browser over said network one or more web pages that identify said

6   components and that include a control that is associated said particular

7   component;

8   in response to selection of said control, displaying on said browser said set of

9   alternative components; and

10   in response to selection of one of said alternative components, updating said design to

11   include said selected alternative component in place of said particular

12   component.

1   8.   The method of Claim 3 wherein said operation for placing an order is an operation for

2   placing an order for a kit that includes a plurality of said components. . ...

1   9.   The method of Claim 8 wherein said operation for placing an order is an operation for

2   placing an order for a kit that includes all of said components.

1   10.   The method of Claim 3 wherein said operation for placing an order is an operation for

2   placing an order with another party for the other party to construct a said circuit.

1   11.   The method of Claim 3 further comprising the step of automatically determining,

2   based on said user-specified requirements, one or more prefabricated circuits for that

3   satisfy said user-specified functional requirements.

1   12.   The method of Claim 11 further comprising the step delivering to said browser over

2   said network one or more web pages that identify said one or more prefabricated

3   circuits and that include at least one control which, when selected, initiates an

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4		operation for placing an order over said network for at least one of said one or more
5		prefabricated circuits.
1	13.	The method of Claim 3 wherein:
2		the user-specified functional requirements include one or more input values; and
3		the step of automatically determining components includes
4		applying one or more input values from said user-specified functional
5		requirements to a formula to determine one or more required
6		parameter values, and
7		determining said components based on said one or more required parameter
8		values.
1	14.	The method of Claim 2 further comprising the steps of:
2		providing data that identifies said components and said topology to a schematic
3		design generation module; and
4		delivering to said browser, based on output from said schematic design generation
5		module, one or more web pages that display a schematic design of said circuit
6		that includes said components arranged according to said design.
1	15.	The method of Claim 14 wherein:
2		the user-specified functional requirements include one or more input values; and
3		the step of automatically determining components includes
4		applying one or more input values from said user-specified functional
5		requirements to a formula to determine one or more required
6		parameter values, and
7		determining said components based on said one or more required parameter
8		values.

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1   16.   The method of Claim 14 wherein the browser is operated by a particular user, the

2   method further comprising the steps of:

3   storing, on server-side storage, design data that specifies the design of said circuit and

4   data that associates the design data with said user; and

5   delivering to said browser a web page that identifies a set of previously saved designs

6   associated with said user, said previously saved designs including the design

7   of said circuit; and

8   in response to user input at said browser, delivering to said browser a web page that

9   includes a schematic diagram generated based on the design data stored on

10   said server-side storage.

1   17.   The method of Claim 16 further comprising the steps of:

2   in response to user input at said browser that indicates that said design is to be shared

3   with a second user, storing data that associates the design data with said

4   second user;

5   delivering to a second browser operated by said second user a web page that identifies

6   a set of previously saved designs associated with said second user, said

7   previously save designs including the design of said circuit; and

8   in response to user input at said second browser, delivering to said second browser a

9   web page that includes a schematic diagram generated based on the design

10   data stored on said server-side.

1   18.   The method of Claim 14 wherein:

2   the step of automatically determining components includes determining components

3   that have specific operational values;

4   the step of providing data that identifies said components includes providing data that

5   identifies components with said specific operational values; and

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6   the step of delivering one or more web pages that display a schematic design of said

7   circuit includes delivering to said browser a web page that displays an

8   arrangement of said components with said specific operational values.

1   19.   A computer-readable medium carrying instructions for designing a circuit that

2   satisfies user-specified functional requirements, the instructions including instructions

3   for performing the steps of:

4   receiving said user-specified functional requirements over a network from a client;

5   automatically determining, based on said user-specified requirements, components

6   and a topology for constructing said circuit;

7   wherein the step of determining components includes determining components that

8   have operational values such that, when said components are arranged

9   according to said topology to form said circuit, the circuit satisfies said user-

10   specified functional requirements; and

11   delivering to said client over said network component information that identifies said

12   components.

   20.   The computer-readable medium of Claim 19 wherein:

1   the client is executing a browser; and

2   the step of delivering said component information includes delivering to said browser

3   one or more web pages that identify said components.

1   21.   The computer-readable medium of Claim 20 wherein the step of delivering includes

2   delivering one or more web pages that identify said components and that include at

3   least one control which, when selected, initiates an operation for placing an order

4   over said network for at least one of said components.

1   22.   The computer-readable medium of Claim 21 wherein the step of

2   automatically determining components includes the steps of:

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3   automatically determining, based on said user-specified requirements, a plurality of

4   suggested components, each of which may be used to design a circuit that

5   satisfies said user-specified functional requirements;

6   delivering to said browser over said network one or more suggested component web

7   pages that identify said plurality of suggested components;

8   in response to selection of a suggested component of said plurality of suggested

9   components identified in said one or more suggested component web pages,

10   receiving from said browser over said network a message that identifies the

11   selected suggested component; and

12   automatically determining, based on said user-specified requirements and said

13   selected suggested component, components for constructing a circuit that

14   includes said selected suggested component and that satisfies said user-

15   specified functional requirements.

1   23.   The computer-readable medium of Claim 22 wherein the step of delivering to said

2   browser over said network one or more suggested component web pages includes

3   delivering one or more suggested component web pages that specify, for each

4   suggested component of said plurality of suggested components, a price value.

1   24.   The computer-readable medium of Claim 22 wherein the step of delivering to said

2   browser over said network one or more suggested component web pages includes

3   delivering one or more suggested component web pages that specify, for each

4   suggested component of said plurality of suggested components, a component

5   identifier and one or more operating values.

1   25.   The computer-readable medium of Claim 21 further comprising instructions for

2   performing the steps of:

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3 determining a set of alternative components for a particular component of said

4   components, wherein each alternative component in said set of alternative

5   components may be used in said circuit in place of a particular component;

6 delivering to said browser over said network one or more web pages that identify said

7   components and that include a control that is associated said particular

8   component;

9 in response to selection of said control, displaying on said browser said set of

10   alternative components; and

11 in response to selection of one of said alternative components, updating said design to

12   include said selected alternative component in place of said particular

13   component.

1 26. The computer-readable medium of Claim 21 wherein said operation for placing an

2 order is an operation for placing an order for a kit that includes a plurality of said

3 components.

1 27. The computer-readable medium of Claim 26 wherein said operation for placing an

2 order is an operation for placing an order for a kit that includes all of said

3 components.

1 28. The computer-readable medium of Claim 21 wherein said operation for placing an

2 order is an operation for placing an order with another party for the other party to

3 construct a said circuit.

1 29. The computer-readable medium of Claim 21 further comprising instructions for

2 performing the step of automatically determining, based on said user-specified

3 requirements, one or more prefabricated circuits for that satisfy said user-specified

4 functional requirements.

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1   30.   The computer-readable medium of Claim 29 further comprising instructions for

2   performing the step delivering to said browser over said network one or more web

3   pages that identify said one or more prefabricated circuits and that include at least one

4   control which, when selected, initiates an operation for placing an order over said

5   network for at least one of said one or more prefabricated circuits.

1   31.   The computer-readable medium of Claim 21 wherein:

2   the user-specified functional requirements include one or more input values; and

3   the step of automatically determining components includes

4   applying one or more input values from said user-specified functional

5   requirements to a formula to determine one or more required

6   parameter values, and

7   determining said components based on said one or more required parameter

8   values.

1   32.   The computer-readable medium of Claim 20 further comprising the steps of:

2   providing data that identifies said components and said topology to a schematic

3   design generation module; and

4   delivering to said browser, based on output from said schematic design generation

5   module, one or more web pages that display a schematic design of said circuit

6   that includes said components arranged according to said design.

1   33.   The computer-readable medium of Claim 32 wherein:

2   the user-specified functional requirements include one or more input values; and

3   the step of automatically determining components includes

4   applying one or more input values from said user-specified functional

5   requirements to a formula to determine one or more required

6   parameter values, and

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7		determining said components based on said one or more required parameter
8		values.

1   34.   The computer-readable medium of Claim 32 wherein the browser is operated by a

2   particular user, the computer-readable medium further comprising instructions for

3   performing the steps of:

4   storing, on server-side storage, design data that specifies the design of said circuit and

5   data that associates the design data with said user; and

6   delivering to said browser a web page that identifies a set of previously saved designs

7   associated with said user, said previously saved designs including the design

8   of said circuit; and

9   in response to user input at said browser, delivering to said browser a web page that

10   includes a schematic diagram generated based on the design data stored on

11   said server-side storage.

1   35.   The computer-readable medium of Claim 34 further comprising instructions for

2   performing the steps of:

3   in response to user input at said browser that indicates that said design is to be shared

4   with a second user, storing data that associates the design data with said

5   second user;

6   delivering to a second browser operated by said second user a web page that identifies

7   a set of previously saved designs associated with said second user, said

8   previously save designs including the design of said circuit; and

9   in response to user input at said second browser, delivering to said second browser a

10   web page that includes a schematic diagram generated based on the design

11   data stored on said server-side.

1   36.   The computer-readable medium of Claim 32 wherein:

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2   the step of automatically determining components includes determining components

3   that have specific operational values;

4   the step of providing data that identifies said components includes providing data that

5   identifies components with said specific operational values; and

6   the step of delivering one or more web pages that display a schematic design of said

7   circuit includes delivering to said browser a web page that displays an

8   arrangement of said components with said specific operational values.

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